Oral communications
English version

CO34-001-e

Several points of reference to better understand and handle chronic pain

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Keywords: Chronic pain; Neuroplasticity; Biopsychosocial model
Puzzling pain.– The limited availability of objective findings and the resistance of chronic pain to conventional treatments undermine the biomedical and curative attitude which is dominant in medicine. To overcome this uneasiness, a better understanding of the pathophysiology of pain is required.
Acute pain: from a model of telephone center to a model of scale.– The nociceptive system is too often understood as a simple electrical cable system passively transmitting information generated by nociceptors. However, numerous evidences show the existence of modulation processes: the nociceptive system works more like a scale than like a telephone center. This will guide the therapeutic approach, in which one tries to increase the activity of inhibitory controls and reduce that of excitatory controls.
The process of chronicity: a gradual transformation involving several vicious circles.– Chronic pain is not merely acute pain that lasts. Persistent pain induces various phenomena (changes in the functioning of the nociceptive system, alterations in motor control, sleep disorders, anxiety/depression, attentional and motivational processes, professional and familial difficulties…) which contribute to the pain maintenance and represent potential therapeutic targets.
An answer to complexity: a rehabilitative, multimodal and biopsychosocial approach.– The partially irreversible character of the chronicity process imposes modest goals, focusing on the physical and psychological remobilization of the patient. Several therapeutic tools have proven their usefulness. Readaptative work (move more, move better, move consciously…) plays an important role. The cognitive, emotional and behavioral aspects of the pain motivate patient education, as well as cognitive-behavioral and motivational strategies. The role of drugs and invasive procedures is limited.
Perspectives for the future: targeting neuroplasticity.– The approaches that are currently under study and may prove particularly interesting include acceptance and commitment therapy, as well as strategies attempting to influence the neuroplasticity phenomena: discriminative sensory training, motor imagery, mirror therapy or virtual reality, transcranial stimulation…

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Peripheral nervous catheter in chronic painful syndromes

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Keywords: Pain; Peripheral nerve catheters
Introduction.– The peripheral nerve block, or catheter, is a technique of choice for several years in peripheral surgery and in the management of chronic pain. Nerve blocks with continuous catheterization are indicated in severe pain, with an undeniable benefit in terms of quality of analgesia and patient comfort.
Thus, they are increasingly used in complex regional pain syndrome (CRPS), as is the case in patients treated in our institution (Pôle Saint-Helier) in collaboration with the Centre for Evaluation and Treatment of Pain (CETD) of La Sagesse (Rennes).
Method.– This is a retrospective study evaluating the effectiveness of the contribution of this technique in terms of recovery of mobility and functional improvement and the incidence of complications.
Results.– We present herein the results of 34 patients treated in our rehabilitation center after a nerve catheter to Chirocaine for complex regional pain syndrome between January 1, 2012 and May 31, 2013.
In 22 cases, the catheter was in the scalene area, in 10 cases in the crural area, and in 2 cases in popliteal area.
Therapeutic benefit in terms of pain and range of motion was noted in 70% of cases for the upper limb and in 50% of cases for the lower limb.
In 30%, complications were observed, the most frequents were leakages and infections.
Discussion.– The benefits of peripheral nerve catheters are at the origin of their development: prolonged analgesia, greater efficiency for mobilization compared to morphine, reduced consumption of analgesic, decrease of the length of stay.
Our results confirm the importance of the nervous catheterization. A good knowledge of the technique is needed to better control the complications which are common.
Conclusion.– The peripheral nerve block is a part of the therapeutic arsenal in the treatment of CRPS. Well positioned in the therapeutic strategy, it can control the pain with a more intensive rehabilitation, and a good functional gain.

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VO_2max in patients with chronic pain: Result of a 4-week rehabilitation program

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Keywords: VO_2max; Deconditioning; Rehabilitation; Chronic pain
Context.– In chronic pain patients exists an aerobic deconditioning that participates to the maintenance of the disability and handicap process. Our main objective was to study the variations of the VO_2max after 4 weeks of physical reconditioning in chronic pain patients.
Methods.– It is a prospective study in which were included 121 chronical pain patients (low back pain, upper limb musculoskeletal pain syndrome or multifocal pain syndromes). The VO_2max was measured by an analyzer of gaseous exchanges during a cycloergometer effort test before and after 4 weeks of reconditioning which associated physical aerobic fitness, dynamic muscular strengthening, ergotherapy and stretching.
Results.– After 4 weeks, we have observed a significant statistical improvement of the VO_2 at the threshold SV1 ($P < 0.0007$) and of the VO_2max (SV2) ($P < 0.0001$) (22.2 ± 5.8 mL/kg/min before rehabilitation vs 23.9 ± 5.2 mL/kg/min after), and an improvement of the distribution of the patients in the categories of the Shvartz's classification: 88 patients (72.7%) were in the category "1" (the lowest) before the rehabilitation and 60 patients (49.6%) after, 24 (19.8%) in the category "2" before and 42 (34.7%) after. Fourteen percent patients had a VO_2max inferior to 17 mL/kg/min before rehabilitation and only 8.3% after.
Discussion.– The proposed physical reconditioning allows an improvement in the aerobic abilities in chronic pain patients. Though, the VO_2max at the end of the program stays under the mean value for the age and the gender. So, the maintenance of a regular physical aerobic activity is essential after a physical reconditioning program.

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Interest of a sheet of rehabilitation for the management of patients with piriformis muscle syndrome

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